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Reclaiming Times Beach

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Questions and Answers about Eastern Missouri Dioxin Cleanup

The proposed cleanup of dioxin-contaminated sites in eastern Missouri will remove the environmental and health hazards from present and future generations. It also will reclaim contaminated property for beneficial use; the largest of the dioxin-contaminated areas, Times Beach, will be transformed from a hazardous-waste site to a public green space along the Meramec River.

On July 20, 1990, the U.S. Environmental Protection Agency, U.S. Department of Justice, Syntex Agribusiness, Missouri Attorney General's Office and the Missouri Department of Natural Resources signed an agreement, called a consent decree, that spells out the details of the cleanup of 27 eastern Missouri sites contaminated with dioxin, including Times Beach. On Dec. 31, 1990, after a public comment period, the U.S. District Court entered the decree and ordered the parties to implement the legally binding agreement. The decree settles a lawsuit filed by the federal government and the state of Missouri against Syntex Agribusiness for the dioxin contamination.

The following information offers questions and answers about the eastern Missouri dioxin cleanup and the consent decree.

THE CLEANUP PLAN

What is the role of Syntex Agribusiness in the dioxin cleanup?

As a settling defendant in the lawsuit, Syntex Agribusiness will carry out and pay for excavation and incineration of dioxin-contaminated soil at Times Beach as well as the incineration of contaminated soil from the other 26 eastern Missouri sites.

The U.S. Environmental Protection Agency considers Syntex to be a potentially responsible party for the dioxin contamination because the dioxin originated from a Verona, Missouri, manufacturing plant acquired by Syntex. The consent decree requires Syntex to carry out nearly all the cleanup and incineration at the company's expense.

What does the cleanup involve?

These are the basic components of the cleanup project:

The U.S. Environmental Protection Agency will transport contaminated soil from the other 26 eastern Missouri sites to the temporary incinerator located at Times Beach;

Syntex will incinerate the contaminated soils and other contaminated material;

Ash remaining after incineration will be non-hazardous; Syntex will bury the ash in trenches at Times Beach and cover it with soil;

Syntex will dismantle and remove the incinerator;

Syntex will contour and revegetate areas where contaminated soil was excavated;

The Missouri Department of Natural Resources will designate Times Beach as a public green space;

The site will be used for hiking, biking and wildlife enjoyment.

How long will the cleanup take?

From entry of the consent decree, the entire cleanup is expected to take between five and seven years to complete. This includes excavating contaminated soil, building and testing the temporary incinerator, incinerating the contaminated material, removing the incinerator, demolishing remaining structures and landscaping after cleanup. The temporary incinerator itself is expected to take less than one year to treat the contaminated material.

How much will the cleanup cost?

The U.S. Environmental Protection Agency estimates the cleanup cost for the 27 eastern Missouri sites will be $118 million. This figure includes the cost of demolishing and disposing of the buildings at Times Beach, excavating contaminated soil at Times Beach, transporting contaminated soil from the other 26 sites to Times Beach, building and operating the temporary incinerator and restoring the land after cleanup.

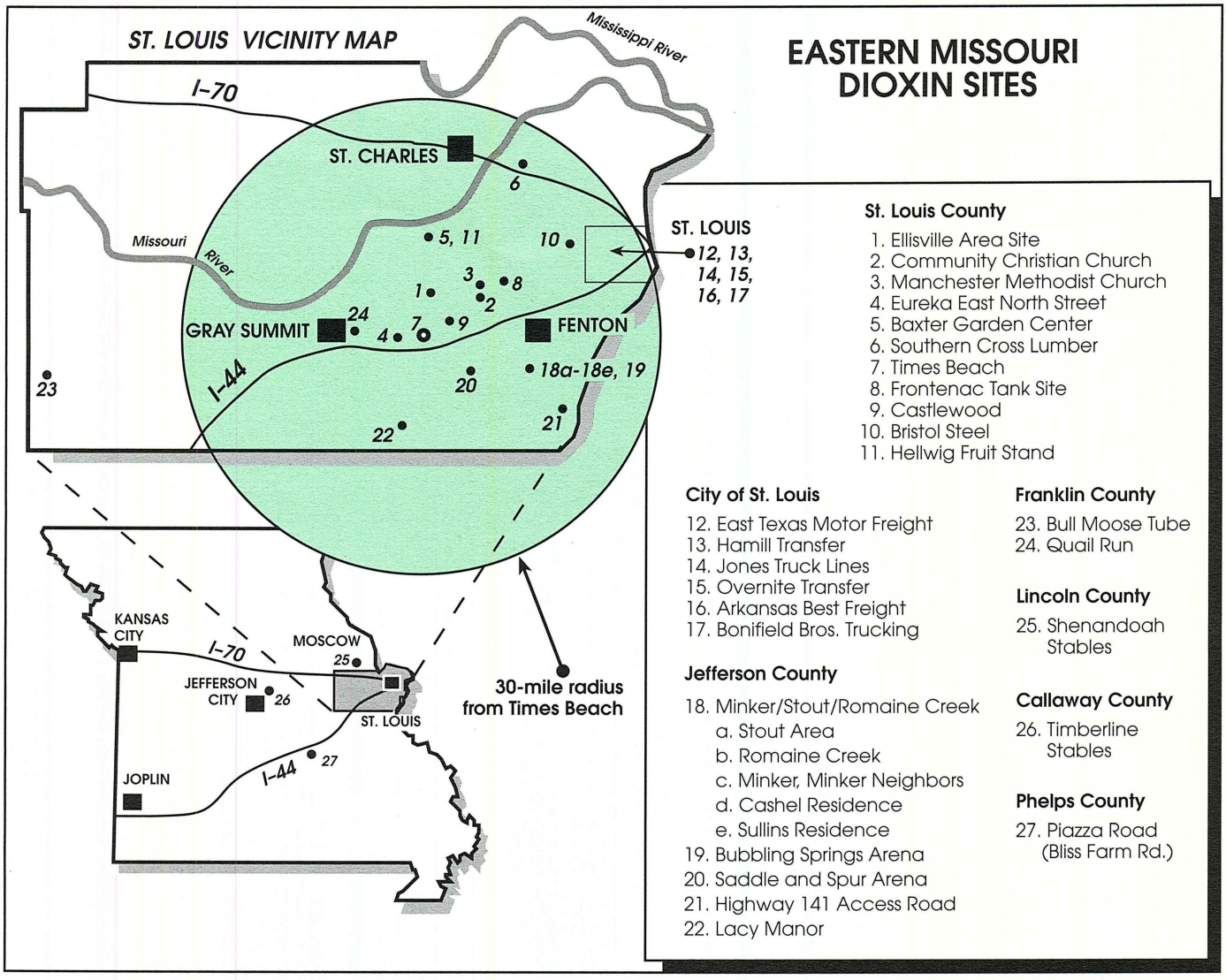
Who will pay for the cleanup?

The great majority of the cost will be borne by Syntex and will not be taxpayer dollars. The U.S. Environmental Protection Agency will pay costs of several million dollars associated with the excavation and transport of contaminated soils from the other 26 sites to Times Beach for processing. The state's portion, which includes costs for overseeing the cleanup activities, will be paid from the Hazardous Waste Remedial Fund.

SITE SELECTION

Why was Times Beach selected as the site for an incinerator?

Comprising approximately 500 acres, Times Beach offers the largest physical site for an incinerator. It also is centrally located to many of the eastern Missouri contaminated sites. Twenty-three of the dioxin sites lie within a 30-mile radius of Times Beach; these 23 sites plus Times Beach comprise 85 percent of the total volume of dioxin-contaminated soil that needs to be treated.



Twenty-three of the 27 eastern Missouri dioxin sites lie within 30 miles of Times Beach.

Why bring all eastern Missouri dioxin waste into St. Louis County for incineration?

Many of the dioxin sites lie within St. Louis County; 11 of the 27 sites to be cleaned up are in St. Louis County. Another six sites lie in the city of St. Louis; together, the St. Louis city and County sites represent approximately one-half of the total volume of contaminated soil. Additional contaminated sites lie within the St. Louis metropolitan area. In fact, only three sites lie outside the St. Louis Standard Metropolitan Statistical Area. (See map).

Why not use a small incinerator and move it from one contaminated site to another?

Many of the contaminated sites are not large enough to accommodate even the smallest of incinerators. The temporary incinerator, storage building, parking areas and ancillary equipment will occupy several acres.

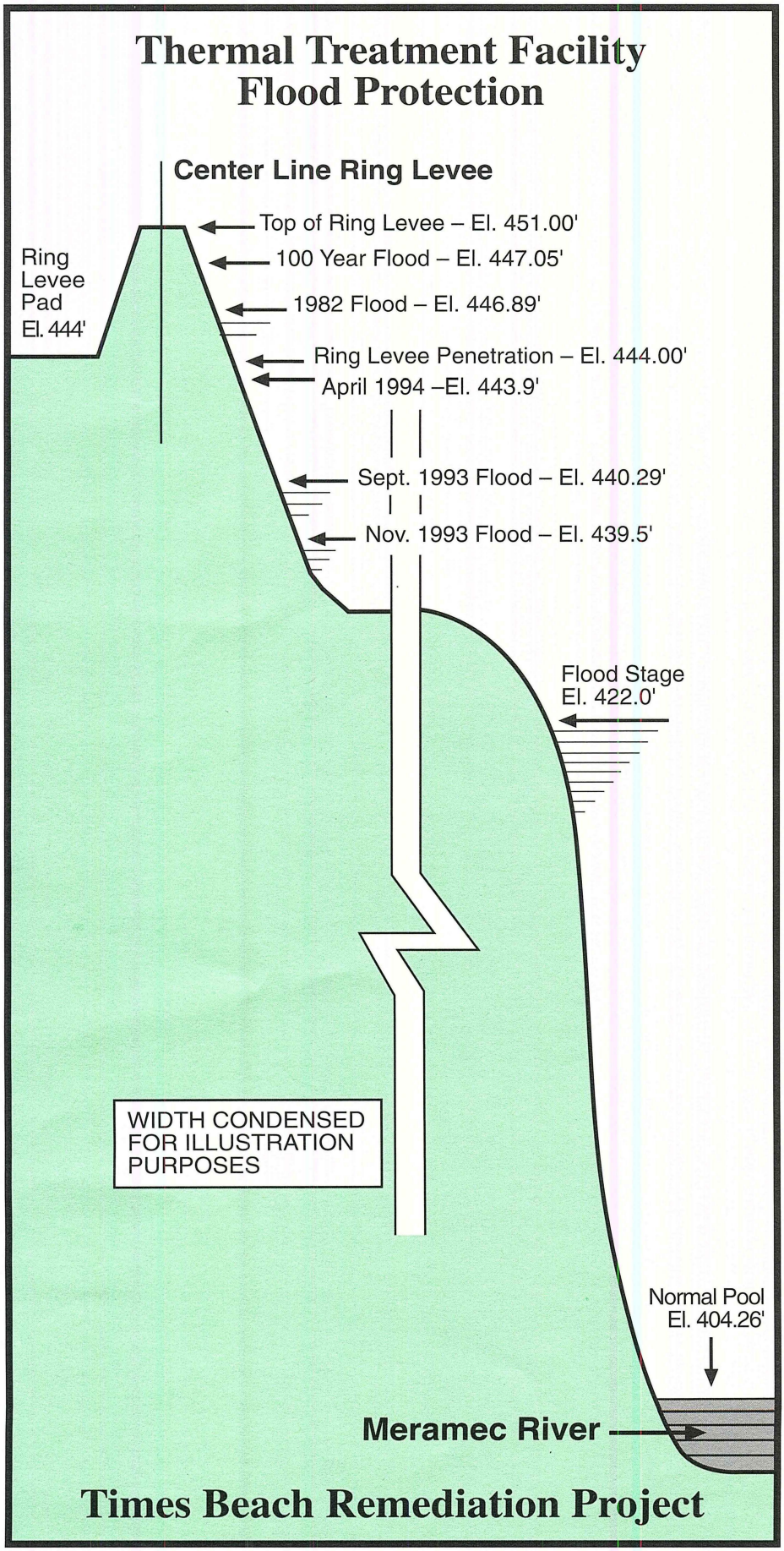
In addition, relocating an incinerator would add significantly to the time to cleanup all 27 sites versus a stationary unit.

WATER SUPPLY

Will the cleanup affect the St. Louis County and Kirkwood water supplies?

No. Several precautions have been taken to prevent contamination of the Meramec River and downstream drinking water.

The Missouri Department of Natural Resources samples water and sediment from the Meramec at Times Beach and downstream from the site on a quarterly basis. Samples are taken above Times Beach and near water supply intakes. Kirkwood's water intake is approximately 14 miles downstream from Times Beach; St. Louis County intakes are approximately 18 miles and 27 miles downstream.


Thermal Treatment Facility
Flood Protection
Center Line Ring Levee
Top of Ring Levee – El. 451.00'
100 Year Flood – El. 447.05'
1982 Flood – El. 446.89'
Ring Levee Penetration – El. 444.00'
April 1994 –El. 443.9'
Sept. 1993 Flood – El. 440.29'
Nov. 1993 Flood – El. 439.5'
Ring Levee Pad El. 444'
Flood Stage El. 422.0'
WIDTH CONDENSED FOR ILLUSTRATION PURPOSES
Normal Pool El. 404.26'
Meramec River
Times Beach Remediation Project

Is the groundwater being monitored?

Yes. The groundwater is being sampled and analyzed every three months.

Will the cleanup threaten endangered species?

No. In fact, removal of dioxin from the environment will enhance the future survival of endangered species in the Meramec River.

FLOOD PROTECTION

Will the incinerator be protected from floods?

Yes. A levee built to U.S. Army Corps of Engineers' specifications will be placed around the incinerator to a height of almost four feet above the 100-year flood level.

As contaminated soil was excavated for incineration, it was stored inside a steel storage structure within the levee to prevent flood water from reaching the contaminated soil.

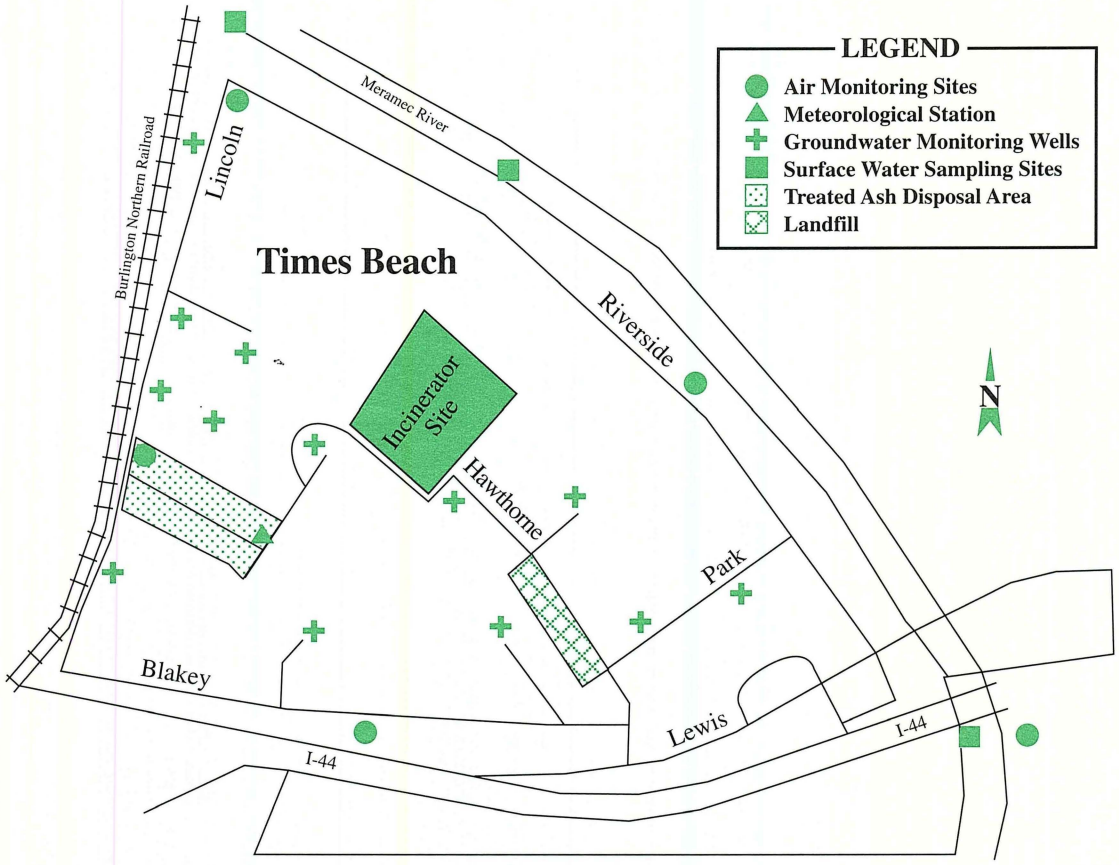
Will the levee appreciably affect flood heights in other communities?

No. The increased flood height attributable to the levee is approximately two inches; this meets federal flood plain requirements.

Do state laws or regulations allow construction of an incinerator in a flood plain?

Yes. Construction of the temporary incinerator is permitted in a flood plain with certain restrictions. Facilities must be protected from floods and must have no appreciable impact on flood heights. As outlined above, a temporary incinerator in Times Beach meets both requirements.

AIR AND WATER MONITORING LOCATIONS



Extensive air and river sampling around the perimeter of Times Beach will help ensure public health during cleanup.

PERMITS AND REGULATORY CONTROL

Will Syntex be required to obtain permits for the incinerator and abide by state and federal regulations?

The work plans, part of the consent decree, require Syntex to apply for the following environmental permits before incineration: a Resource Conservation and Recovery Act permit/hazardous waste facility permit, an air pollution control permit and a National Pollutant Discharge Elimination System permit. Wastewater from the project will be controlled by the water permit to prevent contamination of the Meramec River. A delisting petition from the U.S. Environmental Protection Agency recognizes that the ash remaining after incineration is not a hazardous waste.

PERMITS REQUIRED

Resource Conservation and Recovery Act permit/hazardous waste facility permit from the U.S. Environmental Protection Agency and the Missouri Department of Natural Resources ensures proper handling of waste and incinerator operation.

Air pollution control permit **from the** St. Louis County Health Department mandates equipment to control emissions from the incinerator.

National Pollutant Discharge Elimination System permit from the Missouri Department of Natural Resources regulates the land application and discharge of wastewater.

Delisting petition from the U.S. Environmental Protection Agency recognizes that the ash is not a hazardous waste.

TEMPORARY INCINERATION PROCESS

What will be done to control air pollutants from the temporary incinerator?

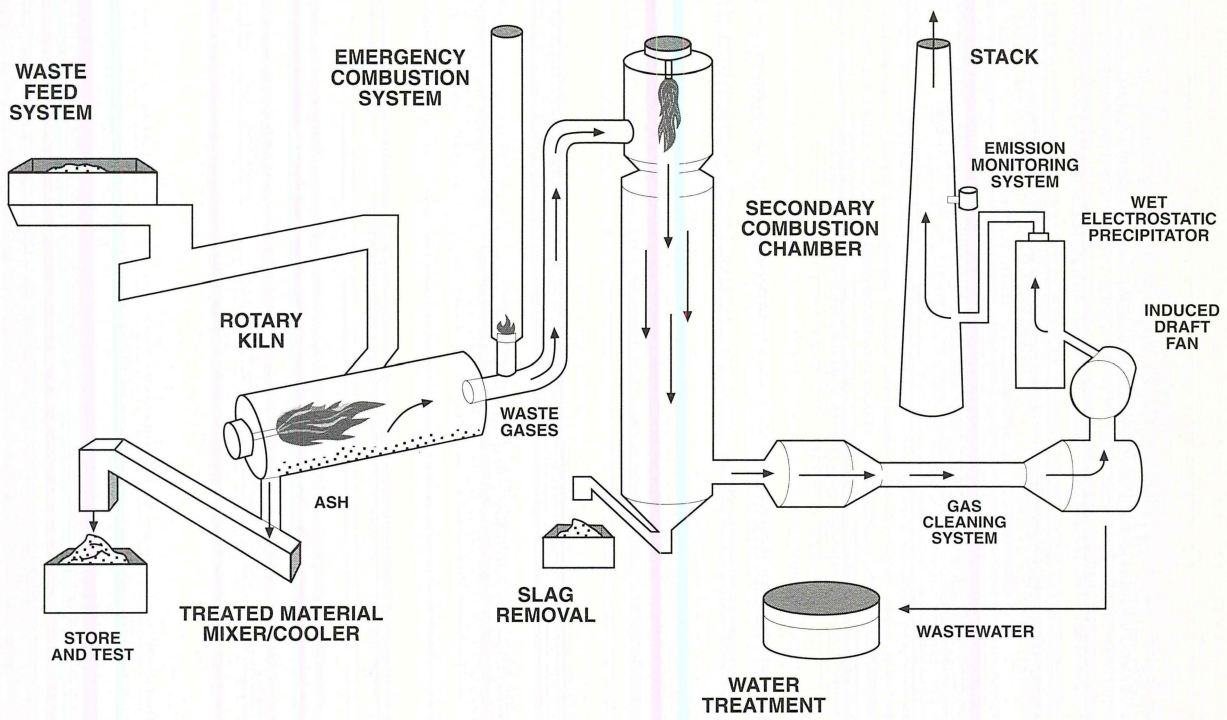
Syntex will be required to install pollution control equipment to reduce air emissions from the incinerator to acceptable levels.

An air monitoring network has been established and operating since 1991. This network will continue to operate throughout the project to monitor the air quality during all stages of remediation.

There will also be several devices installed on the incinerator stack to continuously monitor the conditions necessary to ensure adequate destruction of the dioxin wastes.

DIAGRAM OF INCINERATOR

NOT TO SCALE



Missouri Department of Natural Resources' inspectors are on site, and the monitoring data will be transmitted to Jefferson City by computer where it can be read at any time by Missouri Department of Natural Resources' Hazardous Waste Program staff.

Will the ash that remains after incineration be hazardous?

No. After incineration, the ash will contain less than one part per billion dioxin.

NO PERMANENT INCINERATOR

How will the state ensure that the incinerator at Times Beach will not become a permanent facility?

Prohibitions in the consent decree, state statute and the permit will make certain that the incinerator is temporary and will be removed after destroying the dioxin at eastern Missouri sites.

The Consent Decree:

- limits incineration to only Missouri sites related to activities of Russell Bliss;
- directs Syntex to remove the incinerator within one year after completing incineration;
- sets penalties for failure to meet cleanup deadlines.

The Incinerator Permit:

- will limit incinerator operation to five years, consistent with state law;
- will limit the source and kind of waste to dioxin-contaminated soil from eastern Missouri Bliss sites;
- will prohibit out-of-state waste.

AFTER THE CLEANUP

Will Times Beach still contain any hazardous wastes after cleanup?

Times Beach will be cleaned of dioxin contaminants to meet residential standards. Although Times Beach will no longer be a hazardous-waste site, because it lies in a floodplain, redevelopment as a residential area is not viable.

What will become of Times Beach after cleanup?

The stigma of dioxin contamination, for too long associated with the site, will be removed, and Times Beach will provide another in a series of public green spaces comparable to those being developed along the river by the Meramec River Recreation Association.

The site will provide abundant opportunities for the observation and enjoyment of native wildlife and vegetation against the backdrop of the scenic Meramec River.

What will be the long-term impact of the cleanup on the St. Louis area?

The cleanup will remove the environmental and health hazards presented by dioxin, remove the stigma associated with the sites and return the contaminated properties to beneficial use.

PHASED DEVELOPMENT

RETAIN
- Visitor's Center and offices
- Security fence as indicated on plan drawing
- Riverside Drive and other roads indicated
- Electric line for parking lot

PHASE I
Construction
- FIll borrow pits according to plan drawing
- Shape mound according to plan drawing
- Install visitor parking lot and waste baskets
- Install access control gate according to plan detail 1-A

Habitat Improvements
- Plant trees according to plan
- Install nesting structures as described in plan

PHASE II
Construction
- Install mulched trails
- Install kiosk and signage
- Install latrine

Habitat Improvements
- Develop food plots as indicated in plan

PHASE III
Construction
- Develop Interpretive Building

Fill pit to within 30" of grade, with smoothly sloped bottom. Plant river birch at margin.

Plant wildlife food plot.

Install mulched trail.

Plant wildlife food plot.

Plant mulberry and green ash on filled pit.

Remove fence along river and south to here. Retain fence along highway and southern edge of railroad.

Mow ash disposal area during dormant season to control woody vegetation.

Grade filled borrow cells to rolling terrain for land water application.

Shape 7' platform into knob. Plant basswood and hackberry at crest.

Install mulched trail.

Plant wildlife food plot.

Install mulched trail.

Install mulched trail.

Install mulched trail.

Fill pond to within 30" of grade, with smoothly sloped bottom. Plant black willow and river birch at margin.

Mow landfill during dormant season (December through February) to control woody vegetation.

Plant wildlife food plot.

Fill pit to within 30" of grade, with smoothly sloped bottom. Plant black willow at margin.

Develop Galley West into Nature Area Offices and Interpretive Building. Provide interpretive material on Times Beach history and migratory and nesting birds.

Install visitor parking lot with waste receptacle and latrine.

Install access control gate (detail 1-A).

Meramec River

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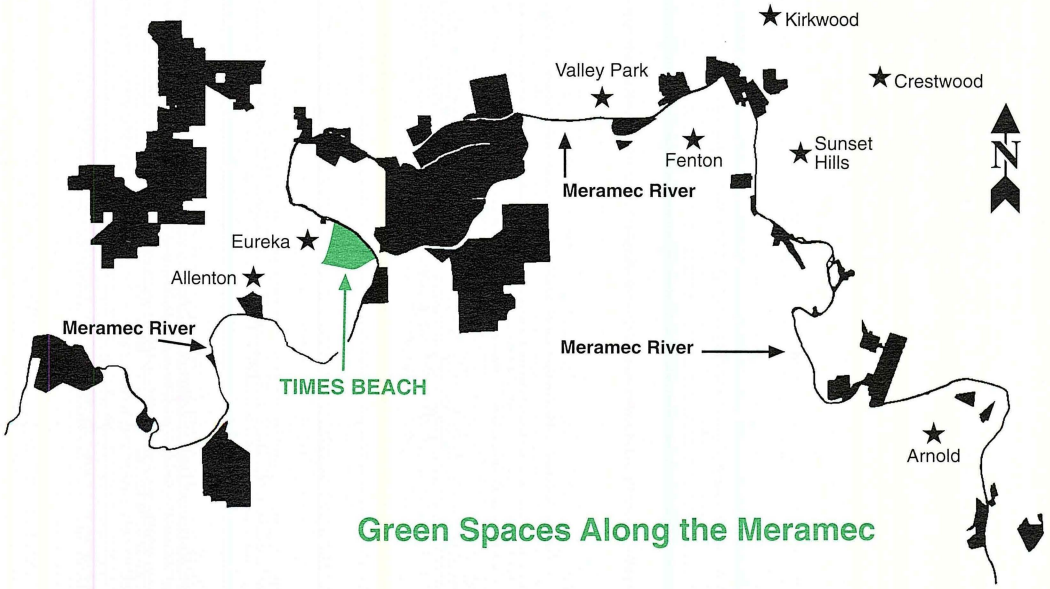
SCALE IN FEET



The model illustrates the future public green space at Times Beach. The 500 acres of restored Times Beach will join existing green spaces along the Meramec River.

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